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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,632	10/23/2003	Roe Alon	ONAR-P01-001	8891
28120 7590 07/02/2007 FISH & NEAVE IP GROUP ROPES & GRAY LLP ONE INTERNATIONAL PLACE BOSTON, MA 02110-2624			EXAMINER SALL, EL HADJI MALICK	
			ART UNIT 2157	PAPER NUMBER
			MAIL DATE 07/02/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.		Applicant(s)	
	10/693,632		ALON ET AL.	
	Examiner		Art Unit	
	El Hadji M. Sall		2157	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 October 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>See Continuation Sheet</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This action is responsive to the application filed on October 23, 2003. Claims 1-16 are pending. Claims 1-16 represent Method and system for validating logical end-to-end access paths in storage area networks.

2. ***Claim Rejections - 35 USC § 102***

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000.

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Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

3. Claims 1-16 are rejected under 35 U.S.C. 102(e) as being unpatentable over Iwatani U.S. 7,103,653.

Iwatani teaches the invention as claimed including Storage area network management system, method, and computer-readable medium (see abstract).

As to claims 1, 11 and 15, Iwatani teaches a process for validating a state of a storage area network (SAN), a state change of a SAN, and a SAN validation manager, comprising:

defining a SAN access path policy representative of SAN logical access paths, said SAN logical access paths defining end-to-end access relationship between an application on a server and data LUNs stored on storage devices in the SAN and having logical access path attributes with attribute values (column 3, lines 17-35),

collecting configuration information from devices of the SAN, standardizing formats of the configuration information and reconciling any conflicts (column 9, lines 19-34),

processing the collected configuration information to identify the SAN logical access paths, and computing the associated attribute values (column 9, lines 35—41),

comparing the identified SAN logical access paths and computed attribute values with the SAN access path policy to identify any logical path discrepancies or violations (column 9, lines 42-52; column 17, lines 17-19).

As to claim 2, Iwatani teaches the process of claim 1, and further including identifying a logical access path violation if at least one identified SAN logical access path is in disagreement with the SAN access path policy (column 9, lines 36-41).

As to claim 3, Iwatani teaches the process of claim 1, and further including defining a SAN notification policy for notifying a user about SAN logical access path violations (column 9, lines 42-46).

As to claim 4, Iwatani teaches the process of claim 3, wherein notifying a user includes sending a message to the user with violation information, said message selected from the group consisting of email, graphic text and SNMP messages (figure 8).

As to claim 5, Iwatani teaches the process of claim 1, and further including identifying partial logical access paths, and comparing logical access path values of the partial path with the SAN logical access path policy (column 9, lines 42-52; column 17, lines 17-19).

As to claim 6, Iwatani teaches the process of claim 1, wherein said configuration information includes device properties selected from the group consisting of server ID, server port configuration, switch port configuration, switch ID, switch IP and domain ID, grouping of devices, zoning of devices, storage device ID, LUNs of storage devices, and LUN masks (column 9, line 19-22).

As to claim 7, Iwatani teaches the process of claim 1, wherein a logical access path attribute comprises an attribute selected from the group consisting of level of redundancy, type of redundancy, number of hops, number of allocated ports, bandwidth, component interoperability, proximity constraints, and type of component authentication .

As to claim 8, Iwatani teaches the process of claim 1, and further comprising user-defined grouping of at least two logical access paths that share at least one of the logical path attribute value or are within a range of predefined logical path attribute Values (figure 2).

As to claim 9, Iwatani teaches the process of claim 1, wherein collecting configuration information includes polling a SAN device API, simulating a CLI session with a SAN device, communicating with a SAN device using a CIM or SNMP protocol, or a combination thereof (column 9, lines 19-22).

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As to claim 10, Iwatani teaches the process of claim 1, and further comprising validating a change state event of the SAN by collecting SAN event description information, and processing the SAN event description information to identify SAN logical access paths that have attribute values that do not comply with the SAN access path policy, thereby indicating a changed state of the SAN (column 14, lines 12-25).

As to claim 12, Iwatani teaches the process of claim 11, and further defining a SAN change plan and comparing the SAN event description information with the SAN change plan (column 14, lines 12-25; column 9, lines 42-52).

As to claim 13, Iwatani teaches the process of claim 11, wherein the SAN change event is selected from the group consisting of an erroneous change in a SAN device configuration, a planned change in a SAN device configuration and a device failure (column 14, lines 12-25).

As to claim 14, Iwatani teaches the process of claim 11, wherein the SAN event description is obtained by at least one of polling, trapping after an event occurs, by a direct administrator input, by an input from a provisioning system about an intended change, by intercepting a change command before an event occurs (column 9, lines 42-52; column 17, lines 17-19).

As to claim 16, Iwatani teaches the SAN manager of claim 15, further comprising a change engine that collects SAN event description information, and processes the SAN event information to identify SAN logical access paths that have attribute values that do not comply with the SAN access path policy, thereby indicating a changed state of the SAN (column 14, lines 12-25).

4. Citation of Relevant Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Prior art: 7,058,702; 7,149,886; 7,194,538.

5. Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to El Hadji M Sall whose telephone number is 571-272-4010. The examiner can normally be reached on 8:00-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on 571-272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-4010.

Information regarding the status of an application may be obtained from the

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Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR.


Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

El Hadji Sall

Patent Examiner

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ARIO ETIENNE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2100

